ST

POTPOuRri
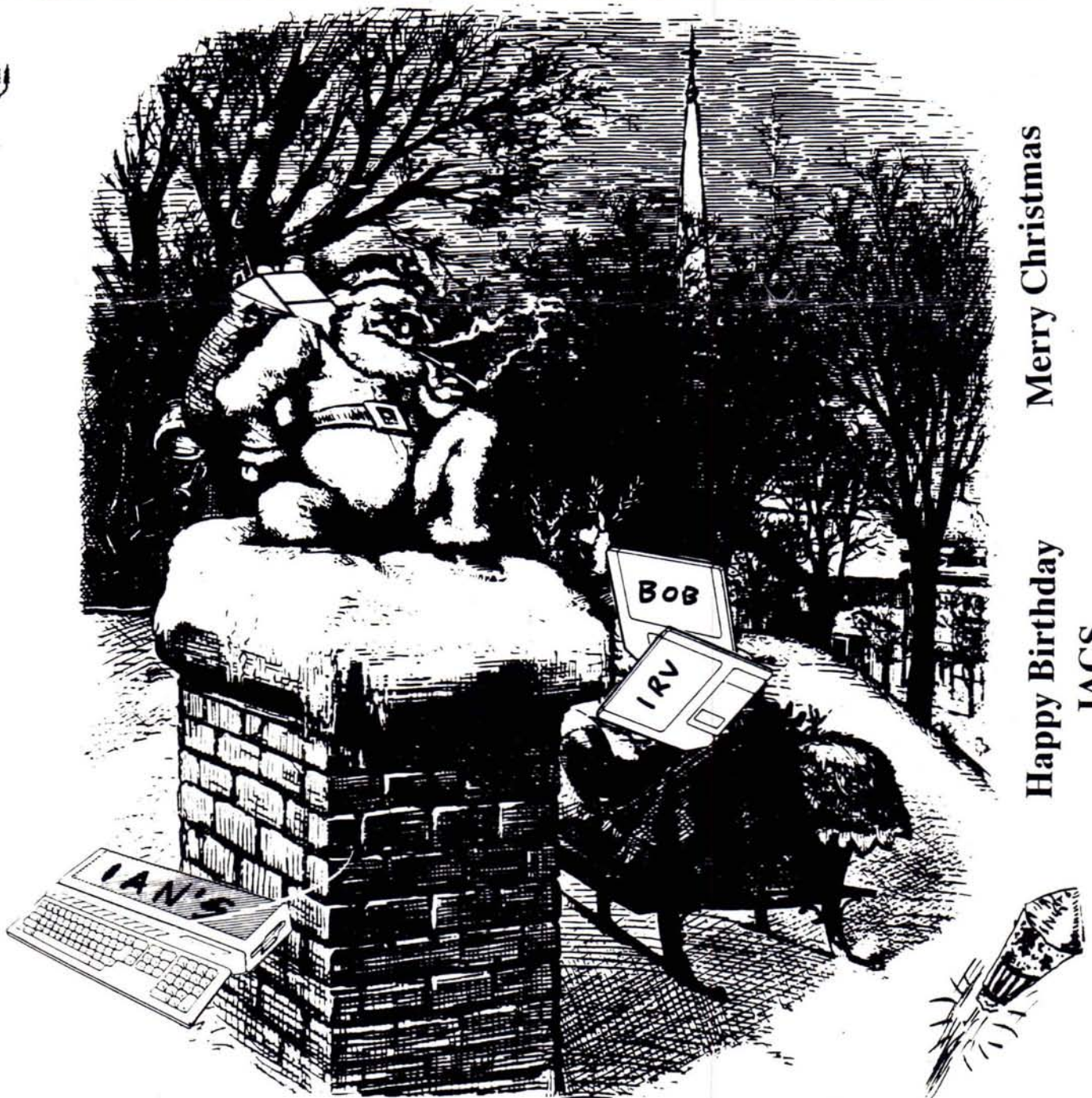
Happy Hannukah

Happy New Year

Merry Christmas

Happy Birthday JACS

A Note from the Editor

As I write this, it is 5 days after the deadline. We do not have **any** advertisements so far, and I am just about ready to go ahead and print without them. We should have three half-page ads, but instead we have none. All three are supposedly in the mail; haven't you heard that one before? When I say the deadline is November 30, I mean it. If the ads do get here, they'll get here the day the newsletter paste-up goes to the printer. I have to give the paste-up to Fred on Sunday. So what happens? We don't get any advertising revenue, and the two stores that would have gotten additional income won't. It hurts everyone when you miss a deadline. Please don't.

On a lighter note, I'd like to point out some of the things we'll have at the December meeting. As you may already know, it's going to be a combined Christmas and belated JACS birthday party. As far as I know right now, we'll have pizza and some kind of drink for everyone! I'm pushing for Cracker JACS, but I don't know. In addition, more plaques will be given to officers, and there will be door prizes. So come one, come all, to the greatest party this year!

Thanks again, Irv, for another cover... C'mon, everyone, guess who the only cover submissions have come from? Not every newsletter has a picture every month... Irv can't come up with covers forever--so please make one yourself!!!

News update

I mentioned in Forrest's report on the Northeast Atari Computer Fair that Megamax was releasing Laser C soon. Apparently they're getting behind. If you'd like to get a newsletter from them (and registered your copy of Megamax C) and haven't, give them a ring at the number in your manual. If you want to get the upgrade as soon as it comes out, you can send your two disks in with a check for $20 from a US bank and they'll send your new disks and manual. The new Laser C has a lot of new features, including resident utilities, integrated editor and compiler (like Turbo C and QuickC on the PC), breaking the 32K barrier, and improved documentation with examples. Sounds like a good deal, folks!

Next ST Potpourri deadline: January 20

JACS is having a birthday party!

ST BITS & PIECES
Irv Feinberg

Atari's new lineup for this coming year includes a computer workstation called ABAQ (as in Chinese abacus), **two** IBM compatible computers and a local area network (LAN) so their computers can exchange information. With this named "Moses PromiseLAN" it can't miss.

The workstation is based on INMOS Corp's 32-bit, 10-MIPS T-800 Transputer chip, which contains a microprocessor, memory, a floating point unit and a special communications facility that enables multiple Transputer chips to work together in parallel. Atari's Transputer workstation was developed by Perihelion Ltd. of Britain. It is targeted to retail for under $5000. Again Atari has created a low price/high performance machine which lacks software. However, Atari is busy lobbying independent software vendors to write for its workstation. The Transputer's biggest plus is it eliminates the bus bottleneck which delays data transfer. In a "what goes around comes around" situation, Tim King, the man who designed the Amiga operating system, is working on the operating system called HELIOS for the workstation. Atari claims that it runs 10 times faster than an IBM AT and 5 times faster than a Macintosh.

Atari has also shown a dual-speed XT-compatible unit called the PC2. This should be available before the end of the year. Or if you want a 80286 based AT-compatible try the PC4 available in the first quarter of 1988. The PC2 will retail for less than $1000 and the PC4 for less than $2000. I wonder if these will ship before the PC1 unveiled earlier this summer?

Atari Corp is at it again, this time with a company reorganization. Jerry Brown, a recent addition to the executive ranks, is gone, and has been replaced as Vice President and General Manager by former Apple Computer executive Walt Wilson. Mr. Wilson will head up a new Atari personal computer division. The other division, video games, is headed by Michael Katz. Both Wilson and Katz report to Sam Tramiel.

Second quarter net income soared 39.2%. Net income rose to $13.5 million from $9.1 million during the prior year. Atari's third quarter operating income was $8.3 million or 14 cents vs. $4.6 million or 10 cents last year.

After buying Federated what's **next** for Atari? To those that didn't catch the play on words, Next is Steven Jobs new company which is readying a new workstation. Rumor has it that Atari may OEM the machine until Next's own production facility is fully operational.

"I WUZ FRAMED!"

Now for some important news. Taking copyright a step further, in Weaver vs. Doe, Weaver owns the copyright on CARDS, a computer game for the Atari ST. Teenager Doe operated a bulletin board where users could download CARDS. Typical hacker vs. industry lawsuit? **No way**—it seems the plaintiff, Weaver, is arguing that a parent who supplies the computer equipment and the telephone line and who tolerates the trading of pirated software contributes to the copyright infringement. What do you think? How about the reseller who sold the parent the computer equipment used to operate a pirate board. Then maybe the guy who ....

Sincere thanks to all who wrote
for the newsletter
(in alphabetical order,
so shut up):

Chuck Babli
Debbie Collarin
Jim Cummings
Robert S. Ely
Irv Feinberg
Jeff Lomicka
Me ☺
Larry Nocella
Ian Sklodowski

30 Megs The Hard (But Easy and Inexpensive) Way

by Jim Cummings

After planning for months and saving for what seemed longer, I finally received a long awaited check and decided to purchase a hard drive for my ST.

I had been watching the ads in the computer magazines for mail order prices. I checked around and few local merchants had the hard drive made by either Supra or Atari (both Seagates in disguise, I'm told) or only had them at full list ($799). I decided to go mail order since the average price for a 20 Meg hovered in the $549 range.

Then I started thinking about all this money I was spending. I had installed a hard drive in an IBM or two and it was pretty easy. As a matter of fact, getting off the little plastic faceplate on the IBM was harder than putting the drive in. You just hooked up this little connector and that bigger connector and then the power thing (that explanation was for the technical types reading this; sorry lay-people). MS-DOS took care of a lot of the rest of the formatting and partitioning and other hard disk issues. Why not do it myself?

How, though? I had recommended Berkeley Microsystems (based on a review I had read) to some JACS members and apparently, their hard disk interface board worked well. I called BMS to get the info. They promised to send me their price list and an article detailing how to build a hard disk from easily available stuff (another technical term, there). I got out my copy of Computer Shopper and started reviewing the prices of "bare" drives and saw I could get a 20 Meg at about $250, or sometimes a little less. 30 Megs were just a little more and 40's about $100-200 extra. Couldn't be any more difficult than hooking up "Godzilla," my ever expanding audio/video system, could it?

When Berkeley's info arrived, I started to change my mind. Their interface adaptor, all of the cables, etc., combined with an Adaptec Controller was in the $250 range. Add a case, a power supply and the hard drive and we are past the $550 "readily available" range.

It was also at this point my beautiful, loving and ever patient wife reminded me an ST is not an IBM. She tactfully mentioned that in certain circles I am known as the one who has to be reminded which is the working end of the screwdriver. She also reminded me hooking up my stereo system (now threatening to take over lower Camden County) is a matter of plugging in jacks until it works and seldom could damage be done to the surround processor or the mixers. Not the case with a hard drive and computer. She happened to mention this while I was reading BMS's article about how easy this was to be.

Easy, huh? MS-DOS is easy, [!!! --Ed.] learning a new word processor is easy, [!!!!] hooking up a laser printer is easy. Building a hard drive system for an ST isn't easy. Not unless you're on speaking terms with step rates (since the passing of Fred Astaire, I was wondering who I would call to ask about that). Or interleaving (I was safe there. My brother heads up our township's waste recovery system. His guys pick up the leaves in the fall. I'd ask him.) Or whether this was DMA 0 or DMA 1. (Monty, I'll take what's behind DMA 1!) [How about TMA-1, HAL?]

No, this definitely wasn't easy. I decide to forget it and order a drive mail order. But, while doing this I remembered the Computer shopper prices again. A 30 Meg was almost the same cost as a 20. Everyone knows these are Seagate drives. I knew how quickly my 20 Meg at work filled up with files and how, every six months, I had to clean it out. I figured I'd mail order a 30 Meg Supra.

What a shock! The 20 cost $549-600 from everyone. The 30? Let's start in the neighborhood of $775 delivered to about $900. Sorry, I can't afford to move into that neighborhood. I called BMS again.

The nice folks there spent a great deal of time with me on the phone explaining their system was designed for someone who already had a drive hanging around (look in your closets and that kitchen junk drawer--you too might have one!) or who picked up an old five or ten meg at a computer flea market with case and power supply for a few dollars (five megs seems hardly worth it). I explained my problem. $550 just OK for 20 Megs. $800 ridiculous for 30. No technical skill. Could they help? Hmm, they said (I was paying for the call, they could afford to think on-line). "We could build you one for less than that!" You could? "Sure, we'll have to use a big IBM clone case but then you'll have 30 megs from a new Seagate, a 150 Watt power supply so you can add another drive (the BMS card will handle another drive), a cooling fan, a custom length cable (3 feet, in my case) and we'll check it out for you. Should take about a week."

Page **4**

I waited for the final bit of info, how much? "About $675, delivered." These Californians are really laid back! Done! I sent them a check for $300 as a deposit and little more than a week later the drive appeared, UPS collect, overnight air express!

It is large but the case is a beauty (I wish my IBM at work had one like it) with an easy opening top. The drive was removed for shipment (but I had no trouble re-installing it) and when I did have a problem I called BMS again and they talked me through it. It came with their software, a built in system clock and a very complete, mostly incomprehensible manual in case I had done it myself (easy, huh - you must be kidding!).

Actually, a techie friend of mine said he could have installed it easily but it would have taken some time, and he had a free weekend in January, etc. I'm glad BMS did it for me. The drive now sits on the floor next to the ST, using one of those IBM system stands. The fan has a slight whisper and the little green busy light flashes now and again.

Thanks to some PD software from Genie, the system now boots without a floppy, directly from the hard drive. Thanks to BMS, the system time is read automatically and I now have three additional drives showing on my desktop, representing the partitions on the hard drive, each showing over 10 million bytes of space! POWER, I love it!

With a hard drive access speed is incredible and storage possibilities amazing. My ten double sided disks of Publishing Partner now rest together in a corner of the hard drive and the floppies are left for backups and some protected games.

If you have any thoughts of adding a hard drive to your system and can afford the space of the clone case (would make a great monitor stand, by the way) I highly recommend BMS. In a 30 and above size drive, their price is great, their service phenomenal and they return phone calls! They said they'd be glad to build one for you; just call them:

Berkeley Microsystems
360 Oakland Avenue, Suite 5
Oakland, California 94611
(415)465-6956.

[Ed. Note-- I also have a hard disk via BMS--but I built mine myself. I can also recommend them highly, since their service recently when I had a problem (with another piece of equipment, which I did not know at the time) was excellent.]

A Dead Rat for Your ST

By Jeff Lomicka

The following article is actually a notes file downloaded from a DEC node. The original notes file was uploaded on June 24, 1987 by the author, and was edited by Forrest Blood for inclusion into the ST Potpourri.

This article describes how to turn the Atari "Trak-Ball" video game controller into a track ball style substitute for the Atari-ST mouse. This track ball is currently available for $8.00 at Kay-Bee Toy Store in the Burlington Center. The device is Atari model number CX22, and is intended for use with the 2600 series video games, and the 800/XL/XE series computers. Atari produced two versions of this track ball and both were model number CX22. While both track balls function identically, they are constructed differently. These instructions are intended for the version which has a black and white case, and reads ATARI TRAK-BALL across the top. This version of the Atari CX22 Trak-Ball should contain 5 integrated circuits.

For those unfamiliar with the track ball concept: this is a device that resembles a mouse that is upside-down, with the ball facing up. The box is much larger than a mouse (hence, a "dead rat"). The ball is a cue-ball from a pool table, and is designed to roll freely on rollers inside the box. A pair of "fire" buttons are provided on either side of the cue ball. You move the cursor around by spinning the cue ball with your fingers or with the palm of your hand (or, if you are a touch-typist, your feet!). One big advantage of the track ball is that it requires no more desk space than needed to set the box down!

The two buttons on the track ball are wired together, and function as the left button of the mouse. The right button could be made available to act as the right mouse button, but that would require a new cable and connector to make room for the extra signal. I didn't do this (yet). The right button is also available as ALT-CLR/HOME on the keyboard (except in WHACK).

WHACK, Window HACKing, is a sophisticated terminal program meant to work in tandem with a DEC computer(s). WHACK allows multiple sessions (one session per window) to be multiplexed over a single phone line. All of the open windows are working simultaneously!

The signals generated by the track ball are slightly different from those generated by the mouse. The mouse generates standard quadrature mouse signals, whereas the track ball generates a direction signal and a clock for each axis. Internal to the track ball, these signals are derived from standard quadrature signals. The conversion involves removing a chip (which is in a socket, so it is very easy) and running four jumper wires. The jumpers connect the internal quadrature signals directly to the outputs. You need a phillips head screwdriver, some thin wire, a soldering iron and solder. A tool for removing IC's from sockets may help, but a small flat head screwdriver will suffice. Here are the instructions:

1   Remove the four screws from the bottom corners of the track ball.

2   Carefully pry the case apart at the seam. There are two friction fittings in the center, and it will take some force to get the two halves of the shell apart.

3   Lift out the cue ball and both of the larger rollers. Place these somewhere where the encoder rings will not be damaged. It would also be a good idea to remember where each encoder wheel goes. They seem to be identical, but you never know.

4   Remove the two screws that hold down the circuit board, and take it out. If you would like more freedom to work, unhook the cable.

5   On the board you should see five DIP package ICs. I will call the one just below the cue ball, and between C7 and R11 "IC1." I'll call the one just below the cable connector and the marking for TP10 "IC5."

Remove IC5. This part is not needed. In fact, you can remove the other three if you want to, only IC1 is needed. If you might ever want to turn this track ball back into its original form, just bend out pins 10, 11, 12, and 13 so that they do not contact anything, and reinsert IC5. You must either remove IC5 or bend out these pins to prevent it from interfering with the outputs.

The integrated circuits may be labeled A1 - A5, instead of IC1 - IC5, on your circuit board. The integrated circuit types are: IC1 = 339, IC2 = 4013, IC3 = 4538, IC4 = 4011, IC5 = 4019. You'll be happy to know that most of these circuits are carried by Radio Shack, in case you accidentally damage one.

6 - Run jumper wires between the following points. Route the wires around the large hole and on the bottom side of the board, so that they will not interfere when inserting the board in the shell, or with any moving parts. Do not route them through the hole.

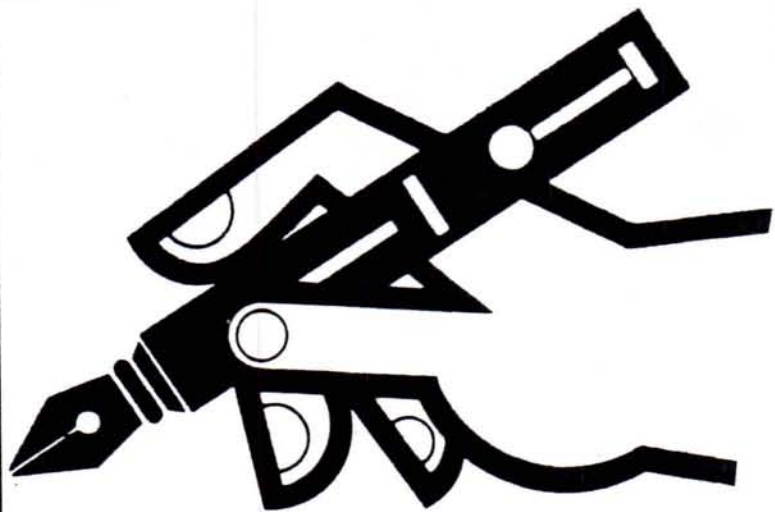| From:	To:	
IC1 pin 13	IC5 pin 10	(To the socket on
IC1 pin 14	IC5 pin 11	the board, not to
IC1 pin 1	IC5 pin 12	the chip itself.)
IC1 pin 2	IC5 pin 13	

7   Replace the circuit board in the shell. Loosely attach the two circuit board screws. Remember to back off a turn until the screws click home into the original threads, to prevent stripping the plastic.

8   Replace the two encoder wheel rollers. Press the rollers home firmly. Adjust the position of the circuit board until the rollers do not scrape the sensors. If this is difficult, try swapping the rollers. When a position is found where they do not scrape, tighten the screws.

9   Replace the cue ball.

10 Carefully route the wires from the connecting cable around the post and retainer molded into the shell, so that they cannot interfere with the encoder wheel or track ball.

11 Align the two friction fittings, and press the two halves of the shell together. Be sure that the buttons line up properly, and that the top is not reversed.

12 Reattach the four screws that hold the shell together. Again, remember to back off first until they click, to prevent stripping the threads.

Now, plug the track ball into the mouse port of the ST, and you are all done!

Enjoy your dead rat, and relish the fact that you only spent eight bucks on your new controller, while a replacement mouse from Atari will set you back $50.

Word Search Answers

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The executive board of

JACS

the

JERSEY ATARI COMPUTER SOCIETY

hopes you have a happy holiday!

drunk driving

JACS

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